focus

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RESOURCES OF THE TROPICS: 1-Africa

When H. M. Stanley "discovered" tropical Africa 80 years ago, most of his fellow Americans were too busy discovering their own country to pay much attention to him. Of the few who went there in his footsteps, fewer came back, and those who did were seldom loud in its praises. It was, they said, a white man's grave, and not exactly a health resort for the African either. There was no way to get rich quickly, and there didn't seem to be any gold worth talking about; there were no prairies to plow and no pine forests to cut, and nobody had anything to sell or any great need to buy. By American standards, it was pretty much of a rural slum, and it was, accordingly, ignored as far as possible.

To many, tropical Africa is still a rural slum or, at least, a backward area, but it can no longer be ignored, for several reasons. Firstly, because it occupies a pivotal position in our politically divided but economically interdependent world: Tanganyika is handier to Russia than Texas, and more tempting strategically. Secondly, because it is in process of giving birth to a whole brood of sovereign powers, each of which is being wooed by the enemies, as well as by the friends, of freedom. Thirdly, because large numbers of educated Africans are becoming increasingly critical of some Western attitudes toward "backward" countries and peoples. And fourthly, because it almost certainly has the largest untapped reservoir of material resources in the world.

These resources are of many kinds; for here, lying between the Sahara and the Kalahari, is a region that is capable of growing almost everything from sugar cane, peanuts, palm oil, and cotton to orchids, roses, and strawberries. (Some of the finest strawberries I have eaten were grown in the Belgian Congo, within sight of the equator.) In the European-settled highlands of Kenya (see map), you can eat garden-fresh salads every day of the year and prime ribs of beef as often as your digestion will allow, and all for the price of a hamburger. The truth of the matter is, of course, that there are several different "tropics" within the encompassing parallels. There is the kind that Hollywood knows, complete with surf-beaten strands; there is the kind, too, that many of us got to know during the past war—dank and gloomy forests, where bread and even boots go moldy in a night. But there are others. In the Kilimanjaro region of Tanganyika, there are more varieties of climate than there are between Florida and Maine. In Uganda, a blanket feels good on the bed almost any night in the year; 300 miles away, in the low-lying Sudan, even a sheet can be burdensome. In the Cameroon mountains, a day without rain is something to talk about; farther north in the same colony crops can fail for want of it.

The floral and faunal diversity of tropical Africa is no less great than the climatic. Almost all the main kinds of animals and plants are found there, using "kind" in the sense of family or order, rather than species. When we get down to species, the region is rich to the point of embarrassment, even of naturalists. Thus, whereas in a northern forest it would be unusual to find more than three or four different species inhabiting a given acre, in the Congo rain forest it is nothing to come upon 30 to 40. Of palms alone there are some 1500 tropical species. And much the same applies to bird life. As for insects, no one, according to Dr. Marston Bates, "has the slightest idea how many different kinds . . . there are in the tropics."

Paralleling this multiplicity of physical conditions and contributing greatly to the total economic potential of the region is a wide array of minerals. The mere enumeration of the more important of them is impressive: uranium, gold, diamonds, copper, cobalt, manganese, bauxite, iron, lead, zinc, tin, vanadium, chromium, mica, asbestos, phosphate, and coal. The magnitude of them is even more impressive. The diamond mines of Tanganyika have been affirmed to be the largest in the world—larger even than those of Kimberley. The uranium deposits of the Belgian Congo may not be the largest in the world, but certainly everybody living there thinks they are, and there are many, outside as well as inside the country, who believe that the present uranium output of the Shinkolobwe district exceeds Canada's.

The Katanga-Northern Rhodesia copper mines are currently producing about 17 per cent of the world's total, or nearly two-thirds of the American output, and the reserves have been estimated to be fully one-third of the world's total. When the Kilembe field in Uganda comes into production, tropical Africa's contribution to the supply of this critical metal may very well be doubled.

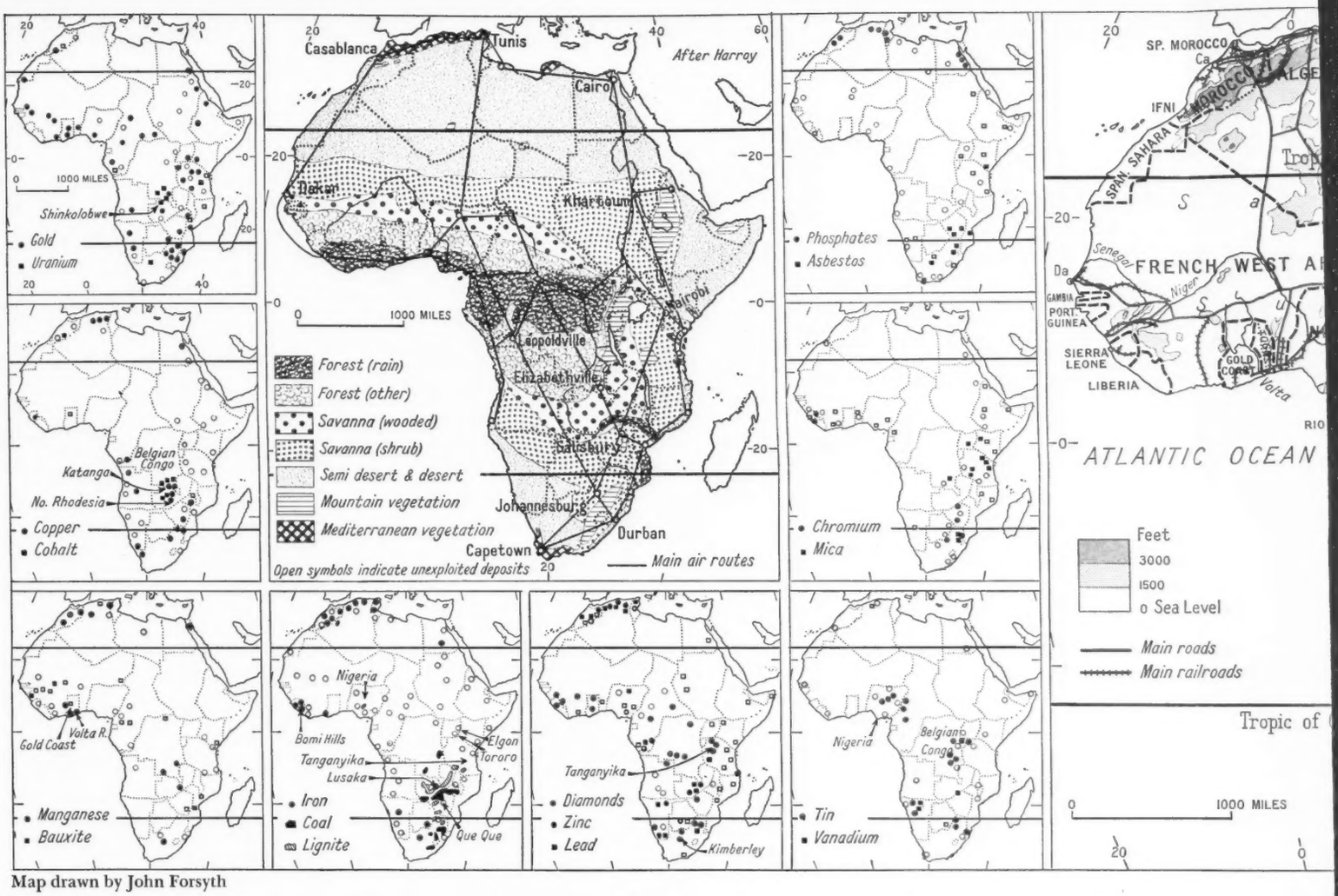
As for iron, there is known to be enough high-grade ore in Northern Rhodesia (near Lusaka), Southern Rhodesia (at Que Que), Liberia (in the Bomi Hills), and Kenya and Uganda (in the Elgon-Tororo area) to take care of the needs of the entire continent for generations to come. The bauxite deposits of the Gold Coast are such that an annual aluminum output of not less than 120,000 tons is envisoned for the Volta River project alone. The situation is scarcely less favorable when it comes to tin (in recent years the Belgian Congo has been producing up to 15 per cent of the world's total and Nigeria about 5 per cent), chromium (Southern Rhodesia and South Africa between them supply more than one-third of the world's output), manganese (the Gold Coast is now shipping about 20 per cent of the world's output), and cobalt (75 per cent of the world's production is presently coming from the Belgian Congo).

True, coal is short in many places (only Nigeria, Tanganyika, and Southern Rhodesia have sizable workings), and oil is almost nonexistant. On the other hand, there is an absolute superfluity of water power in many of the colonies, most of it well located with respect to urban and industrial requirements. Between Leopoldville and Matadi, the Congo River develops a power potential of 114 million horsepower, or considerably more than that for the entire North American continent. The total for tropical Africa is in excess of 250 million horsepower, or more than one-third of the world's water-power potential.

But the minerals and fuels, important as they are and will increasingly become, do not by any means give us the full tally of tropical Africa's resources. In the long run, they may contribute less to the welfare of man than the plant resources. Already plant products far outstrip minerals as revenue earners. In only two of the fifteen leading tropical countries, namely the Belgian Congo and Northern Rhodesia, does a mineral (copper) head the list of exports. In all the others the lead is held by such commodities as cotton, cacao, coffee, sisal, and tobacco. In addition, these same countries raise prodigious amounts of cassava (manioc), plantains, grain sorghums, and corn for domestic consumption, and most of them could well become major sources of supply of citrus fruits, sugar cane, peanuts, and rubber.

Even more significant, the plant: mineral products ratio is increasing here, notwithstanding the enormous demand for African minerals on the world market. And there are several reasons why the trend should continue. In the first place, of the 50 most important agricultural crops in the world, no fewer than 35 are under regular commercial cultivation in British East Africa alone, and the rest are grown domestically or experimentally.* (Canada, by way of contrast, has fewer than 20 of the 50 under such cultivation.) Admittedly, not all of these are grown to advantage, either of the farmer or of the soil. The usual wheat yield in the Kilimanjaro district is be-

* It is now generally believed that about 70 per cent of the crop plants of the world started life in the low latitudes, even some of those we habitually associate with the mid-latitudes.

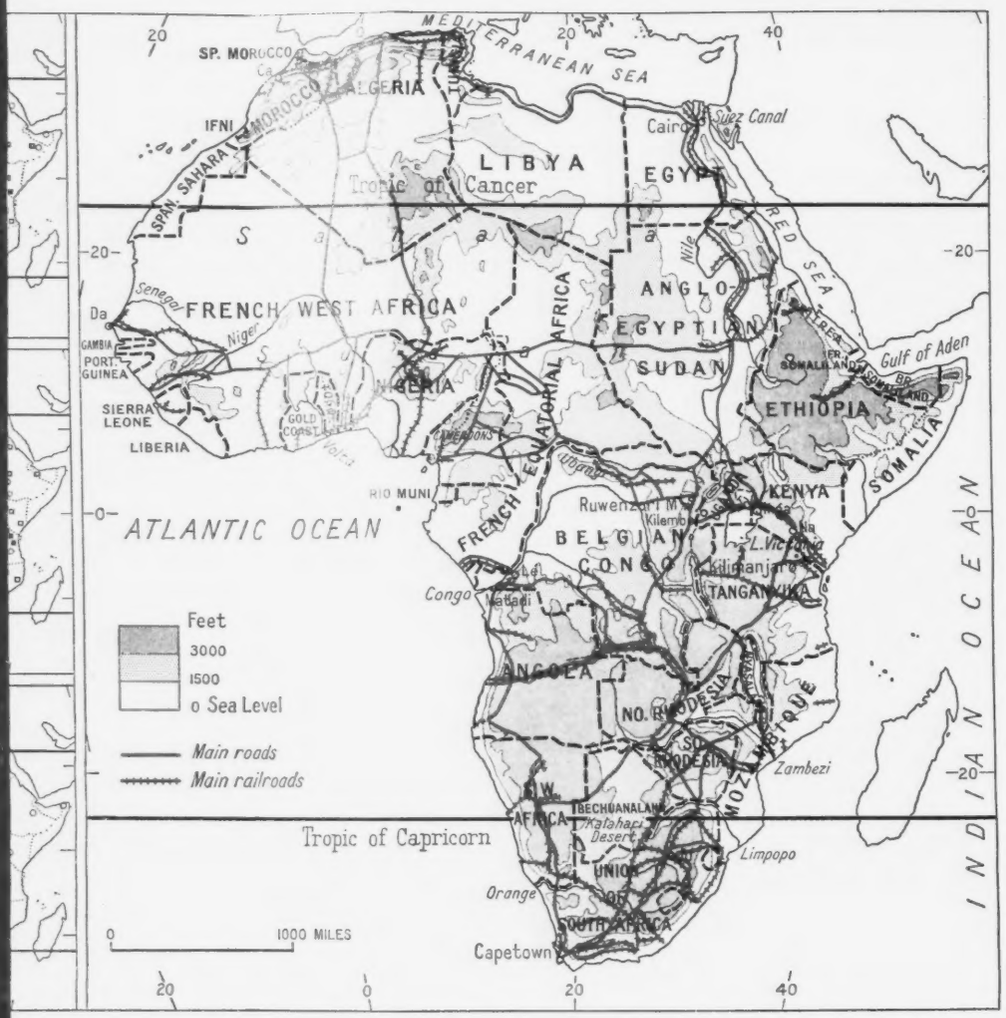


Map drawn by John Forsyth

tween 10 and 15 bushels per acre. However, at least one farmer there recently harvested a double, short-and-long-rains crop that exceeded 80 bushels per acre.

In the second place, except for the high plateaus and the deserts, there is no vegetative rest period in the tropics. As soon as one crop is out of the ground, another can be planted. Bush crops such as coffee, cotton, and cacao can be harvested almost the year round, and the trees of the forest grow without respite.

In the third place, because of the favorable heat and moisture conditions that prevail over large areas of the intertropical zone, rates of growth, plant for plant, are more rapid there than elsewhere. Thus, truck farming land in the vicinity of Léopoldville is theoretically capable of growing twice as many crops of beans in succession in a single year as truck farming land in New Jersey. Although comparable figures are not available on the rates of forest growth, the inference is clear. When we eventually come to regard trees, like beans, as a "crop," the growth-rate factor will weigh heavily in favor of the tropical sources of supply. Mr. Egon Glesinger, in "The Coming Age of Wood," contends that, because of this factor, tropical forest industries may ultimately outstrip their mid-latitude competitors "by converting a richer and more abundant crop of raw materials into a larger range of products than even the most venturesome wood chemist has yet dared to contemplate." It is true that not everyone shares Mr. Glesinger's optimism; after all, aside from teak, mahogany, and some other cabinet woods, the equatorial rain forests have so far contributed little to the world's timber market and nothing to its pulp market. However, bearing in mind the rapid shrinkage of our middle-and-high-latitude forests, the recent development of the "chemigroundwood" process whereby it is said to be



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possible to produce pulp from hardwoods more cheaply than from softwoods, and the enormous hydroelectric potential of tropical Africa, it can scarcely be doubted that its forests will become the focus of increasing commercial attention and perhaps the scene of large-scale integrated industries producing not only pulp and newsprint, but cellulose, plastics, wood sugars and alcohol, acids, insecticides, paints, lubricants, and even foodstuffs.

And what of the animal resources of the region? To the tourist, tropical Africa spells elephant, lion, giraffe, and crocodile, and, to be sure, there are plenty of each, along with a hundred other kinds. But to the African, it is cattle that give the region its meaning. Whether he is a Hausa, a Fulani, a Masai, or a Shilluk, cattle play a prominent part in his tribal life. The number of animals owned by him is the measure of his wealth and prestige. The quality of them, however, is of minor concern, with the result that most African (i.e. native) cattle produce little milk and wretched meat and live on overstocked pastures.

Admittedly, the scales are tipped against the livestock herder. The native grasses provide poor forage, except at the beginning of the rainy season; in the dry season, drinking water presents a problem; and almost everywhere and all the time the virility and usefulness of cattle are impaired by disease—to name only a few, trypanosomiasis (transmitted by a species of tsetse fly), rinderpest, pleuropneumonia, foot-and-mouth disease, anthrax, and heartwater.

In recent years, though, veterinary science has made considerable progress toward their control, and it is now said to be "only a matter of time before the most important animal disease problem of Africa (namely, trypanosomiasis) will be solved by science." When this time comes, the livestock outlook for tropical Africa will be transformed. Indeed, it has been estimated that the rangelands of the Sudan and East Africa alone will then be able to raise more cattle than are currently raised off the pampas of the Argentine. There will still be the problem of quality to cope with, but the crossbreeding of native longhorn and shorthorn cattle with exotic breeds in the tsetse-free zones is already giving promising results. The beef cattle raised by the farmers around Nairobi can stand comparison with anything on this side of the Atlantic. And the same applies to Kenya pigs and sheep.

Needless to say, the elimination of animal disease is not the only grievous problem facing those who wish to tap the resources of the African tropics. Human disease still takes a heavy toll of life and

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energy, though the morbidity rates for malaria, sleeping sickness, typhoid, and helminthiasis are less than a tenth of what they used to be.

Nor is the prevalent tribal attitude toward work particularly helpful to the would-be employer. There is, even now, a widespread reluctance to take an interest in any material goal other than the necessities of the hour and season—a reluctance that the raising of educational and nutritional levels has not yet overcome. The physical environment, too, is prone to put more obstacles than aids in the way of the economic exploitation of the tropics. The rains are torrential and can strip the topsoil off a field while you wait. The droughts are intense and can sear the greenest earth in a matter of days. The heat, except on the elevated plateaus of British East Africa and the adjacent parts of the Belgian Congo, is debilitating and interferes with the metabolism of men and animals. Most of the forest soils, contrary to popular opinion, are quickly exhausted when put to arable uses, and grassland soils lack the strength of those of our North American prairies.

But in spite of all these drawbacks, giant strides are being made in the utilization of Africa's tropical wealth. Wherever the traveler goes, he hears of blueprints for new industries, plans for new roads and airfields (there are a remarkably large number already), projects for the cultivation of new crops, trial borings for new dam sites and mines, and the opening up of new stations for agricultural research.

At Jinja, on the north shore of Lake Victoria, the air is full of industrial talk. With ample electricity soon to be available, with iron ore, limestone, and phosphates nearby, copper in the Ruwenzori Mountains, and cotton everywhere, such talk is natural enough. In the Que Que district of Southern Rhodesia, a project of perhaps even greater magnitude is already under way. Hereabouts is coal, capable of being worked opencut fashion, iron ore, chromium, tungsten, asbestos, mica, and copper. A more auspicious association of the basic ingredients of modern metallurgical economy could hardly be imagined, and it occurs, withal, in one of the most salubrious spots of tropical Africa. Other momentous schemes are afoot in the Belgian Congo and the Gold Coast.

In the light of such facts, is it any wonder that the eyes of men and of nations are turning toward tropical Africa as never before, or that some discerning Africans should be increasingly disinclined to see their newly realized wealth employed for the purpose, as they view it, of bolstering up the economies of more spendthrift peoples?

GEORGE KIMBLE

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